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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,530	01/15/2004	Yoichi Mizuno	1403-0261P	4563

2292 7590 09/29/2005

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EXAMINER

POULOS, SANDRA K

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/757,530

Applicant(s)

MIZUNO ET AL.

Examiner

Sandra K. Poulos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/15/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-3, drawn to a rubber composition, classified in class 524, subclass 398.
 - II. Claim 4, drawn to a pneumatic tire, classified in class 152, subclass 526.

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful in various molding applications and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
3. During a telephone conversation with Andrew Meikle on September 7, 2005 a provisional election was made with traverse to prosecute the invention of a rubber

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composition, claims 1-3. Affirmation of this election must be made by applicant in replying to this Office action. Claim 4 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

4. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because of legal phraseology. The word "comprising" is objected to. Please remove from abstract. Correction is required.

See MPEP § 608.01(b).

7. The disclosure is objected to because of the following informalities:

Please use a consistent spelling of hexamethylene tetramine. In page 5, line 12, it is written "hexamethylene tetramine" and in page 7, line 27, it is written "hexamethylenetetramine."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukumoto et al. (EP 675161 A1).

Fukumoto et al. disclose a rubber composition comprising 100 parts by weight of a diene rubber containing at least either one of natural rubber and polyisoprene rubber

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as a main component, 5 to 6 parts by weight of sulfur, 2 to 5 parts by weight of a modified resorcinolformaldehyde, 2 to 5 parts by weight of a compound that donates a methylene group (a modified methylolmelamine resin), 60 to 90 parts by weight of carbon black having an iodine absorption of 50 to 100 mg/g (which is equivalent to 50 to 100 g/kg) and a dibutylphthalate absorption of 100 to 160 ml/100g (which is equivalent to 100 to 160 $10^{-5} \text{m}^3/\text{kg}$), and preferably, 0.5 to 5 parts of an organic cobalt salt (page 1, abstract; page 3, lines 47-49).

Fukumoto et al. disclose a rubber composition comprising components in the amounts listed above. The present claims disclose the same components in amounts that are broader or overlap those given by Fukumoto et al.; furthermore, the iodine absorption and DBP oil absorption values for the carbon black disclosed by Fukumoto et al. fall within the presently cited values, therefore the composition disclosed by Fukumoto et al. falls within the scope of the present claims.

Fukumoto et al. disclose cobalt salt in parts by weight of the cobalt salt itself whereas the present claims disclose cobalt salt in parts by weight of cobalt. When cobalt naphthenate is used as a representative example of a cobalt salt that is disclosed by both the present application and Fukumoto et al., 0.5 to 5 parts by weight cobalt salt disclosed by Fukumoto et al. can be converted to 0.07 to 0.7 parts by weight of cobalt. This range overlaps the amount disclosed in present claim 3, therefore the composition disclosed by Fukumoto et al. falls within the scope of the present claims.

Hence, Fukumoto et al. anticipate the cited present claims.

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10. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Sandstrom et al. (US 5,229,459) in view of the evidence given by Astlett Rubber Inc., Elite Chem, and Chongqing Paiya Industry & Trade Co. Ltd.

Sandstrom et al. disclose a rubber composition comprising 100 parts by weight of a rubber comprising polyisoprene rubber (column 1, lines 54-62), 1.5 to 6 parts by weight of sulfur (column 4, lines 40-42), 0.5 to 5 parts by weight of a methylene acceptor including resorcinol (column 3, lines 9-10 and 29-31), 0.5 to 5 parts by weight of a methylene donator (column 4, lines 2-3), a cobalt compound such as a cobalt salt from about 0.1 to 3 parts by weight (column 4, lines 9-29), and optionally an additive such as carbon black in the amount of 45 to 70 parts by weight (43-44 and 51-59).

Sandstrom et al. disclose a rubber composition comprising components in the amounts listed above. The present claims disclose the same components using amounts that overlap those given by Sandstrom et al., therefore the composition disclosed by Sandstrom et al. falls within the scope of the present claims.

Sandstrom et al. disclose cobalt salt in parts by weight of the cobalt salt itself whereas the present claims disclose cobalt salt in parts by weight of cobalt. When using cobalt stearate as a representative example of a cobalt salt that is disclosed by both the present application and Sandstrom et al., 0.1 to 3 parts by weight cobalt salt disclosed by Sandstrom et al. can be converted to 0.01 to 0.28 parts by weight of cobalt. This range overlaps the amount disclosed in present claim 3, therefore the composition disclosed by Sandstrom et al. falls within the scope of the present claims.

Sandstrom et al. do not explicitly disclose an iodine absorption or DBP oil absorption value, however, the carbon black that is disclosed by Sandstrom et al. is HAF Black N-330. From the manufacturers' data sheets listed above, N-330 has an iodine absorption of 82 ± 5 g/kg and a DBP absorption of 102 ± 5 10^{-5} m³/kg. The iodine absorption and DBP absorption values given above for the carbon black disclosed by Sandstrom et al. fall within the ranges for the carbon black disclosed in the present claims. Therefore, the carbon black disclosed in Sandstrom et al. falls within the scope of the present claims.

Hence, Sandstrom et al. anticipate the cited present claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ishikawa et al. (US 4,947,916): Rubber composition comprising a natural and/or isoprene rubber, sulfur, resorcinol, methylene donating group, cobalt compound, and carbon black.

Inui et al. (US 6,310,144 B1): Rubber composition comprising a natural rubber, sulfur, resorcin resin, methylene donating group, cobalt salt, and carbon black.

Hatano et al. (US PG PUB 2002/0045687 A1): Rubber composition comprising a natural rubber, sulfur, resorcin, methylene donating group, cobalt salt, and carbon black.

Mizuno et al. (US PG PUB 2003/0060551 A1): Rubber composition comprising a natural and/or isoprene rubber, sulfur, resorcin resin, methylene donating group, cobalt salt, and carbon black.

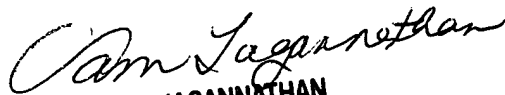
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571)

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272-6428. The examiner can normally be reached on M-F 7:30-5:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)


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